

REMARKS

Reconsideration and allowance of the above identified application are requested.

Petition for Extension in Time for Reply

Applicant petitions the Commissioner of Patents and Trademarks to extend the three month time for reply to the Office action mailed May 19, 2004, for one additional month to September 19, 2004. A check that includes the fee for the requested extension is enclosed.

Information Disclosure Statement

The attached IDS includes documents cited in a International Search Report mailed to the Applicant on May 11, 2004 by the International Searching Authority in regards to a PCT application based on the above-mentioned application. A check that includes the fee for submitting the IDS after the first Office action is enclosed.

Specification.

The paragraph that starts on page 2, line 30 is amended to clarify the claimed invention within the scope of the original application.

35 U.S.C. § 103 Claim Rejection.

The Applicant traverses the rejection of Claims 1 and 2, as amended, as obvious under 35 U.S.C. § 103 (a) because the references, Wesdorp et al, Zolper, Hoefler et al, and Luzio et al cited in the Examiner's Office Action, teach fat substitutes comprising gels that comprise water and soluble compounds such as protein, hydrolyzed starch, carrageenan, cationically crosslinkable carbohydrates, and so forth. The Applicant's invention on the other hand discloses a fat substitute comprising dietary fiber gel that comprises insoluble fiber.

The References Do Not Teach the Claimed Invention

There is nothing disclosed in Wesdorp et al, Zolper, Hoefler et al, and Luzio et al that teaches the modification of the references suggested by the Examiner. Obviousness depends on the differences between a claimed invention and the prior art. 35 U.S.C. § 103(a). The establishment of obviousness requires that the prior art must teach or suggest all the limitations

of the claimed invention. *In re Royka*, 490 F.2d 981, 984-85 (CCPA 1974). The Applicant traverses the rejection because nothing in Wesdorp et al, Zolper, Hoefler et al, and Luzio et al teaches all the elements and limitations of the Applicant's claimed invention.

The Applicant's invention claims processed cheeses made with an emulsified liquid shortening composition comprising dietary fiber gel. Fiber, which is typically a solid, can be processed to produce a wide variety of products. The dietary fiber gel produced from a highly refined fiber, as described in U.S. Pat. No. 5,766,662, which is incorporated by reference into the Applicant's invention disclosure, is an insoluble dietary fiber. As disclosed at Col. 3, line 58 to Col. 4 line 36 of the '662 patent the "gel products . . . contained in the insoluble fraction . . . from the first stage . . . are subjected to [a] second stage . . . [of] treatment. Following the second stage . . . solids are again separated from the liquids . . . [and] the recovered solids consist of cellular debris in the form of a hydrated gel. The gel may be dried." Although insoluble materials are not soluble, insoluble materials can be dispersed. Fortunately, as noted at Col. 4, lines 37-44 of the '662 patent, dietary fiber gel "is readily dispersible." Thus, dietary fiber gel comprises insoluble dietary fiber. None of the cited references teach shortening or fat substitute composition comprising dietary fiber gel comprising insoluble dietary fiber.

For example, Wesdorp et al at Col. 2, lines 36-42, teaches fat substitutes that are dispersions having a dispersed fat and "at least two distinct gelled phases." The gelled phases comprise gelling agents that dissolve in a solvent, typically water. As for the gelling agents, Wesdorp et al teach at Col. 5, line 22-31 that "[p]referably, one of the gelling agents is a gelling protein[, and] . . . the other gelling agent is a starch, more preferably a hydrolyzed starch." Further, at Col. 6, lines 35-38, Wesdorp et al teaches that "[t]he liquid employed in the gel-forming composition which is to act as solvent . . . preferably consists essentially of water." One skilled in the art would know that if a liquid is a solvent then the gelling agents must be soluble so as to readily dissolve in a solvent. Clearly, Wesdorp et al teaches fat substitutes that comprise soluble materials, for example gelling protein and starch, and not insoluble dietary fiber.

Further, Zolper, and Hoefler et al teach fat substitutes comprising gels derived from soluble compounds. Zolper does not teach a fat substitute composition comprising insoluble dietary fiber because at Col. 2, lines 33-58 the fat substitute comprises one of several possible gel systems and "each gel system is based on a gel form from carrageenan," a generally linear polysaccharide extracted from red seaweed, wherein at Col. 4, lines 18-20, and at Col. 5, lines

59-62 Zolper teaches that carrageenan “dissolves into water,” albeit at an elevated temperatures. Clearly, Zolper teaches soluble polysaccharides, presumably derived from red seaweed fiber, and not insoluble dietary fiber. Similarly, Hoefler et al do not teach a fat substitute composition comprising insoluble dietary fiber because at Col. 1, lines 66-68, the process for making a fat substitute comprises “mixing a carbohydrate with water to form a gel,” wherein at Col. 3, lines 8-12, the gel is “formed by dissolving a carbohydrate in water,” again at an elevated temperature. Clearly, Zolper teaches soluble carbohydrates that are presumably derived from fiber, and not insoluble dietary fiber.

In addition, Luzio et al teach fat substitutes comprising gels that comprise a cationically crosslinkable carbohydrate. Luzio et al do not teach a fat substitute composition comprising insoluble dietary fiber because at Col. 7, lines 1-14 the fat substitute comprises a cationically crosslinked gel, wherein the gel “comprises a cationically crosslinkable carbohydrate, a suitable gel inducing cation, and a suitable liquid—preferably, water.” Clearly, Luzio et al teach a cationically crosslinkable carbohydrate and not an insoluble dietary fiber that can readily exist in a hydrated form as a gel.

The References Lack Any Suggestion to Combine

There is nothing disclosed in Wesdorp et al, Zolper, Hoefler et al, and Luzio et al that teach the modification of the references suggested by the Examiner. Obviousness requires that the suggestion to make the claimed invention must found in the prior art. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991). When only a single prior art reference is cited, the reference must contain a suggestion or motivation to make the claimed invention. *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). Such a suggestion is lacking in the cited reference. Even if the reference fully taught the Applicants invention, the Applicant traverses the rejection because nothing in Wesdorp et al, Zolper, Hoefler et al, and Luzio et al affirmatively suggests making the cited combination.

Wesdorp et al, Zolper, and Hoefler et al are directed to fat substitutes that comprise gels that comprise soluble compounds, such as hydrolyzed starch, and linear polysaccharide, and Luzio et al is directed towards the use of a cationically crosslinkable carbohydrate, while the Applicant’s invention is directed toward insoluble dietary fiber gel. The new dietary fiber gel compound utilized in the Applicant’s invention, as described in U.S. Pat. No. 5,766,662, which is

incorporated by reference into the Applicant's invention disclosure, is an insoluble dietary fiber that is produced by highly refining fiber. The cited references do not teach or suggest utilizing an insoluble dietary fiber gel compound.

For example, Wesdorp et al in Example 1 at Col. 9 and Example 4 at Col. 10 teach gel compositions prepared by dissolving ingredients in water. Clearly, Wesdorp et al teach a fat substitute comprising a gel prepared from a water soluble compound that is dissolved in a water phase, and does not teach or suggest the dispersion of an insoluble dietary fiber gel compound.

Separately, Zolper, and Hoefler et al also teach gel compositions comprising carrageenan, a soluble carbohydrate that dissolves in water. For example, Zolper in Claim 2 teaches that the gel includes "at least one soluble carbohydrate." Clearly, Zolper teaches a fat substitute comprising a gel that includes a soluble compound, and does not teach or suggest the dispersion of an insoluble dietary fiber gel compound. Similarly, Hoefler et al in Example 1 at Col. 4 teaches gel compositions prepared by "the complete dissolution . . . of pectins" in deionized water through mechanical mixing. Clearly, Hoefler et al teach a fat substitute comprising a gel prepared by dissolving soluble compounds such as pectin in water, and does not teach or suggest the dispersion of an insoluble dietary fiber gel compound.

Further, Luzio et al teach gel compositions comprising a cationically crosslinkable carbohydrate. For example at Col. 7, lines 8-14, Luzio et al teach a gel structure having a "carbohydrate lattice . . . [for] entrapping the liquid phase" that is formed as a carbohydrate salt of a cationically crosslinkable carbohydrate and "a gel inducing cations." Further in Example 3 at Col. 14, Luzio et al point out "the importance of the a gel inducing cation being present, in addition to the cationically crosslinkable carbohydrate." Clearly, Luzio et al teach a cationically crosslinkable carbohydrate that can form at liquid entrapping crosslinked lattice, typically for entrapping water, and does not teach or suggest the dispersion of an insoluble dietary fiber gel compound.

Applicant has amended Claims 1 and 2 to clarify the foregoing distinction. In view of the amendments to Claims 1 and 2, and above arguments, Applicant requests that the rejections of Claims 1 and 2 as being obvious under 35 U.S.C. § 103 (a) be withdrawn.

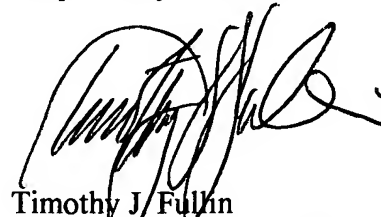
The cited fat substitutes of Wesdorp et al, Zolper, Hoefler et al, and Luzio et al comprise gel compounds that are different from the Applicant's invention, such that the Applicant's fat substitute is a compound that differs from the cited fat substitutes. In Wesdorp et al, Zolper,

Hoefler et al, and Luzio et al, the fat substitute does not comprise insoluble dietary fiber having completely disrupted particles that exits as a cellular debris. However, Applicant's fat substitute comprises an insoluble dietary fiber gel. The Applicant's fat substitute is a different compound than taught in the cited references. Because the Applicant's fat substitute is a different compound than known fats or fat substitutes, the amount of fat substitute that replaces fat in processed cheese formulations, and the resulting solids content of the processed cheeses can be different depending on the desired taste, flavor, and texture such that the use of any known processed cheese formulation would be unobvious.

Further, the cited fat substitutes of Wesdorp et al, Zolper, Hoefler et al, and Luzio et al comprise gels that are different from the gel described in the Applicant's invention. In the cited references, the gels are more closely related to gelatin, preferably, a gelatin that is capable of entrapping a liquid such as water and that can be formed in small droplets or sized by chopping, shredding, shearing and so forth and emulsified with lipid or fat. The gels in the cited references are not a hydrated insoluble fiber. However, in Applicant's fat substitute, the gel is a hydrated insoluble fiber that can be emulsified with lipid. Applicant's gel is not taught or suggested in the references.

Applicant believes that the amended patent application is now in condition for allowance. Accordingly, the Applicant respectfully requests that a Notice of Allowance be issued in this case. The Examiner is invited to contact the undersigned by telephone or facsimile if the Examiner believes this would advance the prosecution of the matter.

Respectfully submitted,



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